

Remarks

The Applicants note with appreciation the confirmation of continued allowance of Claim 10.

The Applicants also acknowledge and note with appreciation the withdrawal of a number of the previous art-based rejections.

The Applicants acknowledge the new rejection of Claims 1 – 3 under 35 U.S.C. §103 over the hypothetical combination of DE ‘121 with EP ‘949. With respect to EP ‘949, we agree with the Examiner’s helpful comments concerning the battery of EP ‘949 including positive and negative electrodes separated by a separator, the positive electrode and negative electrode both having a support and conductor framework. We further agree with the Examiner’s frank acknowledgment that EP ‘949 does not teach that the positive electrode has a region adjacent the cell case which is free of active material.

Unfortunately, DE ‘121, although related to nickel-metal hydride storage batteries, fails to provide teachings or suggestions to one of ordinary skill in the art that would lead such a person toward the invention as recited in Claims 1 – 3. The Applicants agree that the Abstract discloses that the batteries comprise fibrous electrodes impregnated with an active material. The Applicants further agree that the electrodes are pre-treated to remove an adherent coating of active material from one side thereof.

However, there is a fatal deficiency in the teachings of DE ‘121 that does not cure the acknowledged deficiencies associated with EP ‘949. Specifically, DE ‘121 teaches that the adherent coating of dried active material is removed from the fiber sides away from the electrode surface to improve contact between the electrode and the partition. The “partition” disclosed in DE ‘121 is the

same as the “separator” in the Applicants’ Claims 1 - 3. This is logical inasmuch as the batteries of DE ‘121 are described as being a pile or stack construction of battery sub-cells separated by partitions. There is utterly no reference in DE ‘121 to the claimed cell case as recited in Claims 1 – 3. Thus, DE ‘121 discloses positive and negative electrodes having partitions located between them. This is the same as the positive and negative electrodes as recited in Claim 1 with the separator located between them. Claim 1 further refers to the cell case which bears against a positive electrode containing active material, but the positive electrode has a side bearing against the cell case as a metallic region which is free of active material. This is neither taught nor suggested by DE ‘121, which teaches having treated fibrous electrodes having their sides bearing against adjacent partitions, not cell cases.

As a consequence, even if one of ordinary skill in the art were to hypothetically combine the teachings of DE ‘121 with EP ‘949, the result would be positive and negative electrodes having treated sides (with the adherent material removed) in contact with partitions, not cell casings. This is sharply different from the language of Claim 1, which requires that the metallic region free of active material bear against the cell casing, not separators. Withdrawal of the 35 U.S.C. §103 rejection of Claims 1 – 3 is respectfully requested.

The Applicants have amended Claim 1 by adding the subject matter of Claim 2. Claim 2 has accordingly been canceled. Claim 1, as now amended, further specifies that the region which is free of active material extends over about 5 to about 15% of the total thickness of the positive electrode. The Applicants respectfully submit that DE ‘121 does not disclose, teach or suggest that a region extending over about 5% to about 15% of the total thickness of the positive electrode is free of active

material. The disclosure of DE '121 is limited to the fact that the surface of the electrode should be treated for removing active material from the outward facing side. This is clearly only a treatment of the surface of the electrode. As a consequence, the surface treatment of DE '121 would not lead to the invention as recited in Claim 1, inasmuch as DE '121 only removes active material from the outside surface. In other words, it would be far from obvious to speculate from DE '121 that shows a surface treatment of electrode from removing active material from the outside surface to the invention as recited in Claim 1, wherein the region which is free of active material extends over about 5 to about 15% of the total thickness of the positive electrode. The Applicants accordingly respectfully submit that this is a further reason for patentability of Claims 1 and 3. Withdrawal of the 35 U.S.C. §103 rejection is respectfully requested.

Claims 4 – 6 are rejected as being obvious over the further hypothetical combination of JP '269 with EP '949 and DE '121. We respectfully submit that the hypothetical combination of JP '269 with the primary and secondary references does not cure the fatal deficiencies associated with that hypothetical combination, namely the failure to teach or suggest metallic regions of positive electrodes free of active material in contact with the cell casing, as opposed to the separator. Withdrawal of the rejection of Claims 4 – 6 is respectfully requested.

The Applicants acknowledge the rejection of Claims 7 – 9 based on the further hypothetical combination of Hara with EP '949 and DE '121. We respectfully submit that those claims are also allowable for the same reasons set forth above with respect to Claims 1 – 3, on the one hand, and 4 – 6, on the other hand. Hara does not provide teachings or suggestions that cure the deficiencies of DE '121 as it is hypothetically combined with EP '949.

Finally, we respectfully submit that Claims 11 and 12 are allowable over the further hypothetical combination of Kohler and Sugalski with EP '949 and DE '121. Neither Kohler nor Sugalski cure the deficiencies associated with DE '121 with respect to teaching or suggesting that a metallic region of a positive electrode which is free of active material bear against a cell casing, as opposed to a separator or partition. Withdrawal of the rejection of Claims 11 and 12 is respectfully requested.

In light of the foregoing, we respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,

  
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